

Title (en)  
FLOW RATE MEASUREMENT DEVICE

Title (de)  
DURCHSATZMESSVORRICHTUNG

Title (fr)  
DISPOSITIF DE MESURE DE DÉBITS

Publication  
**EP 3940345 A4 20221026 (EN)**

Application  
**EP 19919397 A 20190314**

Priority  
JP 2019010620 W 20190314

Abstract (en)  
[origin: EP3940345A1] A flow-rate measuring apparatus (1) transmits and receives a measurement signal between transducers (2, 3) through a fluid (5) inside a pipe (4), the measurement signal having a plurality of frequencies and a time length. The flow-rate measuring apparatus (1) calculates a correlation coefficient between a reference signal corresponding to the transmitted measurement signal, and the received measurement signal. The flow-rate measuring apparatus (1) calculates a flow rate of the fluid (5) inside the pipe (4) based on the measurement signal, when a peak value of the correlation coefficient is higher than a threshold (Th1). The flow-rate measuring apparatus (1) retransmits the measurement signal with changing at least one of the frequency and the time length of the measurement signal, when the peak value of the correlation coefficient is equal to or lower than the threshold (Th1).

IPC 8 full level  
**G01F 1/66** (2022.01); **G01F 1/663** (2022.01); **G01F 1/667** (2022.01)

CPC (source: EP US)  
**G01F 1/662** (2013.01 - US); **G01F 1/663** (2013.01 - EP); **G01F 1/667** (2013.01 - EP)

Citation (search report)

- [E] EP 3922957 A1 20211215 - OMRON TATEISI ELECTRONICS CO [JP]
- [AD] JP 2008304281 A 20081218 - HONDA ELECTRONIC
- [A] JP 2005037290 A 20050210 - YOKOGAWA ELECTRIC CORP
- [A] JP S5527935 A 19800228 - TOKYO SHIBAURA ELECTRIC CO
- See also references of WO 2020183719A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**EP 3940345 A1 20220119**; **EP 3940345 A4 20221026**; **EP 3940345 B1 20240214**; CN 112639412 A 20210409; CN 112639412 B 20240611; JP 7111247 B2 20220802; JP WO2020183719 A1 20211014; US 11709083 B2 20230725; US 2022034694 A1 20220203; WO 2020183719 A1 20200917

DOCDB simple family (application)  
**EP 19919397 A 20190314**; CN 201980057766 A 20190314; JP 2019010620 W 20190314; JP 2021505466 A 20190314; US 201917274964 A 20190314